

State Conservation Commission Presentation

NNSG Habitat Treatment
Demonstration Plots

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April 27, 2007

A stylized, low-poly mountain range graphic in shades of brown and tan, located in the bottom right corner of the slide.

NNSG Demonstration Plots

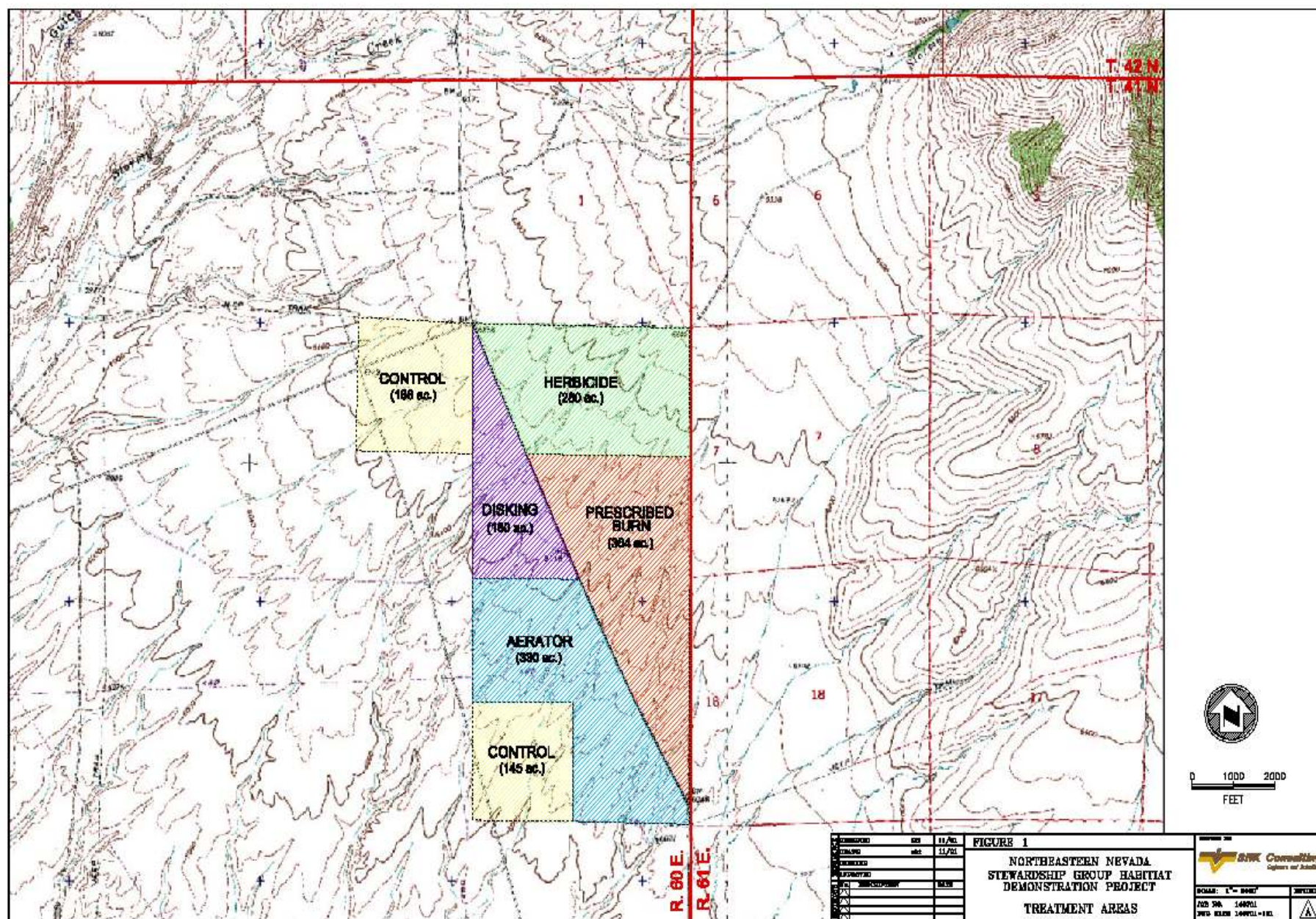
- ◆ Funding for the Project provided by the N-1 Grazing Board
- ◆ Planning for the Project conducted by the NNSG
- ◆ Implementation of the treatments by Starr Valley Conservation District, Morris Ag Air, and NDF - 2002

Purpose

- ◆ Sage-grouse habitat improvement
- ◆ Forage production
- ◆ Fuels management
- ◆ Watershed management

Treatments

- ◆ Prescribed burning
- ◆ Aeration
- ◆ Disking
- ◆ Herbicide (Spike)
- ◆ Control



Prescribed Burning





**Low Intensity /
Low Severity Fire**

Pre-Burn Conditions





Post-Burn Conditions





First Growing Season – After Grazing



End of First Growing Season



Second Growing Season



Second Growing Season



Third Growing Season



Fourth Growing Season





NNSG Prescribed Burn Monitoring

GROUND COVER	Transect Number										Mean
	PB L	PB M	PB N	PB O	PB P	PB Q	PB R	PB S	PB T	PB U	
Bare Ground/ Litter/ Rock	84	94	100	99	97	100	97	95	99	89	95.4%
Subtotal	84	94	100	99	97	100	97	95	99	89	95.4%
Perennial Grasses											
	0	0	0	0	0	0	0	0	0	0	0%
Subtotal	0	0	0	0	0	0	0	0	0	0	0%
Forbs											
	0	0	0	0	0	0	0	0	0	0	0%
Subtotal	0	0	0	0	0	0	0	0	0	0	0%
Shrubs											
Wyoming Big Sagebrush	1	6	0	1	0	0	0	0	0	0	0.8%
Rabbitbrush	2	0	0	0	3	0	3	5	1	11	2.5%
Low Sagebrush	13	0	0	0	0	0	0	0	0	0	1.3%
Wyoming Big Sagebrush Seedling	0	0	0	0	0	0	0	0	0	0	0%
Subtotal	16	6	0	1	3	0	3	5	1	11	4.6%
Annual Grasses and Undesirable Species											
BRTE	0	0	0	0	0	0	0	0	0	0	0%
Subtotal	0	0	0	0	0	0	0	0	0	0	0%
Total Cover	16	6	0	1	3	0	3	5	1	11	4.6%
Total Perennial Cover	16	6	0	1	3	0	3	5	1	11	4.6%

Aeration



Aeration



Pre-Treatment Condition



First Growing Season – with 30 Days of Grazing



End of First Growing Season



Second Growing Season





Second Growing Season



End of Third Growing Season



End of Fourth Growing Season





NNSG Aerating Monitoring

GROUND COVER	Transect Number										Mean
	A Q	A R	AS	AT	A J	AI	A D	A A	AC	AF	
Bare Ground/ Litter/ Rock	75	72	72	86	81	85	86	93	75	95	82%
Subtotal	75	72	72	86	81	85	86	93	75	95	82%
<i>Perennial Grasses</i>											
Subtotal	0	0	0	0	0	0	0	0	0	0	0%
<i>Forbs</i>											
Subtotal	0	0	0	0	0	0	0	0	0		0%
<i>Shrubs</i>											
Wyoming Big Sagebrush	20	26	26	3	18	7	14	7	22	5	14.8%
Rabbitbrush	5	2	2	9	1	8	0	0	3		3.0%
Low Sagebrush	0	0	0	2	0	0	0	0	0		0.2%
Wyoming Big Sagebrush Seedling	0	0	0	0	0	0	0	0	0		0%
Subtotal	25	28	28	14	19	15	14	7	25	5	18%
<i>Annual Grasses and Undesirable Species</i>											
BRTE	0	0	0	0	0	0	0	0	0	5	0%
Subtotal	0	0	0	0	0	0	0	0	0	0	0%
Total Cover	25	28	28	14	19	15	14	7	25	5	18%
Total Perennial Cover	25	28	28	14	19	15	14	7	25	5	18%

Disking Treatment



Pre-Treatment Condition



Post-Treatment Condition



End of First Growing Season



Second Growing Season



Second Growing Season



End of Fourth Growing Season



End of Fourth Growing Season





NNSG Disking Monitoring

GROUND COVER	Transect Number										Mean
	D A	D B	DC	DD	D E	D F	D G	D H	DI	DM	
Bare Ground/ Litter/ Rock	87	91	91	95	89	86	95	99	93	98	92.4%
Subtotal	87	91	91	95	89	86	95	99	93	98	92.4%
<i>Perennial Grasses</i>											
Subtotal	0	0	0	0	0	0	0	0	0	0	0%
<i>Forbs</i>											
Subtotal	0	0	0	0	0	0	0	0	0	0	0%
<i>Shrubs</i>											
Wyoming Big Sagebrush	10	9	2	4	7	10	3	1	2	0	4.8%
Rabbitbrush	3	0	7	1	3	4	2	0	5	2	2.7%
Low Sagebrush	0	0	0	0	0	0	0	0	0	0	1%
Wyoming Big Sagebrush Seedling	0	0	0	0	1	0	0	0	0	0	0%
Subtotal	13	9	9	5	11	14	5	1	7	2	7.6%
<i>Annual Grasses and Undesirable Species</i>											
BRTE	0	0	0	0	0	0	0	0	0	0	0%
Subtotal	0	0	0	0	0	0	0	0	0	0	0%
Total Cover	13	9	9	5	11	14	5	1	7	2	7.6%
Total Perennial Cover	13	9	9	5	11	14	5	1	7	2	7.6%

Herbicide Aerial Application (2004)



Pre-Treatment Condition



End of First Growing Season



End of Second Growing Season





Site: H-G
Date: 12-5-6
Plot:
Line #:
Direction: SW

GROUND COVER	Transect Number										Mean
	H A	H D	HE	HF	H G	HJ	H K	H L	HC	HB	
Bare Ground/ Litter/ Rock	93	95	85	10 0	96	94	90	80	91	87	91.1%
Subtotal	93	95	85	10 0	96	94	90	80	91	87	91.1%
<i>Perennial Grasses</i>											
Subtotal	0	0	0	0	0	0	0	0	0	0	0%
<i>Forbs</i>											
Subtotal	0	0	0	0	0	0	0	0	0	0	0%
<i>Shrubs</i>											
Wyoming Big Sagebrush	6	0	15	0	0	0	10	20	5	2	5.8%
Rabbitbrush	1	3	0	0	2	3	0	0	4	11	2.4%
Low Sagebrush	0	0	0	0	0	0	0	0	0	0	0%
Wyoming Big Sagebrush Seedling	0	0	0	0	0	0	0	0	0	0	0%
Basin Big Sagebrush	0	2	0	0	2	3	0	0	0	0	0.7%
Subtotal	7	5	15	0	4	6	0	20	9	13	8.9%
<i>Annual Grasses and Undesirable Species</i>											
BRTE	0	0	0	0	0	0	0	0	0	0	0%
Subtotal	0	0	0	0	0	0	0	0	0	0	0%
Total Cover	7	5	15	0	4	6	10	20	9	13	8.9%
Total Perennial Cover	7	5	15	0	4	6	10	20	9	13	8.9%

Control Area 2003





Control Area 2003

Control Area 2004



Control Area 2005





NNSG Control Monitoring

GROUND COVER	Transect Number										Mean
	NC A	NC B	NC C	NC D	NC F	NC G	SC A	SC C	SC D	SC E	
Bare Ground/ Litter/ Rock	58	71	71	80	64	60	80	81	83	77	72.5%
Subtotal	58	71	71	80	64	60	80	81	83	77	72.5%
<i>Perennial Grasses</i>											
Subtotal	0	0	0	0	0	0	0	0	0	0	0%
<i>Forbs</i>											
Subtotal	0	0	0	0	0	0	0	0	0	0	0%
<i>Shrubs</i>											
Wyoming Big Sagebrush	40	26	20	18	34	35	17	19	13	23	24.5%
Rabbitbrush	2	3	9	2	1	5	3	0	4	0	3%
Low Sagebrush	0	0	0	0	0	0	0	0	0	0	0%
Wyoming Big Sagebrush Seedling					1						
Subtotal	42	29	29	20	36	40	20	19	17	23	27.5%
<i>Annual Grasses and Undesirable Species</i>											
BRTE	0	0	0	0	0	0	0	0	0	0	0%
Subtotal	0	0	0	0	0	0	0	0	0	0	0%
Total Cover	42	29	29	20	36	40	20	19	17	23	27.5%
Total Perennial Cover	42	29	29	20	36	40	20	19	17	23	27.5%

NNSG Prescribed Burn Monitoring

TREATMENT	Transect Number										Mean
	1	2	3	4	5	6	7	8	9	10	
PRESCRIBED BURN	16	6	0	1	3	0	3	5	1	11	4.6%
AERATION	25	28	28	14	19	15	14	7	25	5	18%
DISKING	13	9	9	5	11	14	5	1	7	2	7.6%
HERBICIDE	7	5	15	0	4	6	0	20	9	13	8.9%
CONTROL	42	29	0	20	36	40	20	19	17	23	27.5%





Conclusions

- ◆ Treatments on these Range Sites can improve forage for livestock and wildlife
 - ◆ Treatments can increase quality of habitat for sage-grouse
 - ◆ Treatments reduce the fuel loading, especially when grazed
 - ◆ Probably increased water infiltration in the watershed
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